GENERAL NOTES

1. PORTIONS OF THE SYSTEM SCHEMATIC ARE SHOWN OUT-OF-FUNCTION. THESE OUT-OF-FUNCTION PORTIONS ARE SHOWN FOR INFORMATION AND REFERENCES PROVIDED TO THE DOCUMENT WHICH CONTROLS THE EQUIPMENT.
2. ALL UNIQUE IDENTIFICATION NOS. AND CABLE NOS. SHOWN ARE PREFIXED WITH EI, UNLESS OTHERWISE NOTED.
3. EACH DEVICE ASSOCIATED WITH THE INCOMING LINE BREAKER AND BUS FOR THE LOW VOLTAGE SWITCHGEAR, MOTOR CONTROL CENTER AND 480V ELECTRICAL DISTRIBUTION PANELS IS PART OF THE 480V AC AUXILIARY POWER DISTRIBUTION SYSTEM EI. FOR LOAD CIRCUIT BREAKERS AND THE ASSOCIATED DEVICES, THE UNID IS FORMED BY PREFIXING THE GENERATING UNIT SYSTEM DESIGNATION AND THEN ADDING THE LOADS SPECIFIC COMPONENT IDENTIFIER. SEE ENGINEERING PROCEDURE EP-8.01 FOR COMPLETE UNID EXPLANATION.
4. SEE SYSTEM EI CABLE PROGRAM FOR COMPLETE CABLE INFORMATION INCLUDING SPARE CONDUCTORS. ONLY THOSE CONDUCTORS USED ARE SHOWN.
5. SSCS CABLE SHIELDS ARE TERMINATED ON THE SHIELD GROUND BUS LOCATED ADJACENT TO THE TERMINAL BLOCKS. TERMINATION POINTS ON THE GROUND BUS ARE NOT DEDICATED TO A SPECIFIC CABLE.
6. THE TOTAL TIME DELAY OF THE COMBINATION OF 27 AND 27X RELAYS IS APPROXIMATELY (30 TO 90 SEC AT 98 % VOLTAGE.) A61
7. BOP ISOLATOR CABLE SHIELDS THAT ARE SHOWN CONNECTED ARE TERMINATED ON THE SIGNAL GROUND BUS (SG) LOCATED ADJACENT TO THE TERMINAL BLOCKS. TERMINATION POINTS ON THE GROUND BUS ARE NOT DEDICATED TO A SPECIFIC CABLE. BOP ISOLATOR DIGITAL OUTPUTS ARE SOLID STATE SWITCHING (SS SW) DEVICES. S1

SYMBOLS:

MON XXX — SEAMS MONITORING SYSTEM POINT NUMBER

AN XXX — UNIT ANNUNCIATOR POINT NUMBER

OR XXX — OPERATIONS RECORDER POINT NUMBER

52S- CELL-MOUNTED CIRCUIT BREAKER AUXILIARY SWITCH IN THE MEDIUM VOLTAGE SWITCHGEAR. THE SWITCH IS ACTUATED BY THE OPERATION OF THE CIRCUIT BREAKER MAIN CONTACTS.

LOW VOLTAGE SWITCHGEAR NOTES:

10. 480 V LOW VOLTAGE SWITCHGEAR BOARD FUNCTIONS ARE SHOWN ON SHEETS 2 THRU 8 OF THIS DRAWING.
11. SEE WESTINGHOUSE ELECTRIC CORPORATION, TVA CONTRACT 76K3-85126 FOR 480 V CLASS 1E SWITCHGEAR SCHEMATICS AND CONNECTION DIAGRAMS.
12. KEY INTERLOCK SCHEME FOR TIES BETWEEN TRAIN A AND TRAIN B LOW VOLTAGE SWITCHGEAR IS ARRANGED SUCH THAT ONLY 3 OF THE 4 MAIN AND TIE BREAKERS CAN BE CLOSED AT ANY GIVEN INSTANT.
13. SEE GOULD/ITE CONTRACT, TVA 75K5-85583 FOR 6.9 KV AND 13.8 KV SCHEMATICS AND CONNECTION DIAGRAMS.
14. SUPPLY BREAKER ON 480 V LOW VOLTAGE SWITCHGEAR IS ELECTRICALLY OPERATED WITH LOCAL CONTROL ONLY AT THE BOARD. THE EMERGENCY BREAKER IS MANUALLY OPERATED WITH A SHUNT TRIP ACTUATED BY ESFAS OR LOSS OF POWER FOR TRAIN ISOLATION.

REFERENCE DRAWINGS:

TYPICAL SCHEMATICS - NVSG CIRCUIT ARRANGEMENTS	5GW0749-RP-2
WESTINGHOUSE INTERNALS & WISC DIAGRAMS	1245F02
WESTINGHOUSE FEEDER BREAKER SCHEMATIC	1245F04
WESTINGHOUSE 3-LINE & SCHEMATIC	1245F07
WESTINGHOUSE AUX. RELAY SCHEMATIC	1245F08
SEAMS SYSTEM SCHEMATIC	5GW2640-IS
125 CLASS 1E DC POWER DISTR SYS SINGLELINE	5BW0625-EU
ANNUNCIATOR SYSTEM SCHEMATIC	5GW2640-IA
ANNUNCIATOR AND OPERATIONS RECORDING SYS SCHEMATIC	9CW7364-QA
WISC SHEDS AND LOADS FCLD.	2GW0900-IL
480 V SWITCHGEAR 2EX1-A SINGLE LINE	2AW2726-EI
480 V SWITCHGEAR 2EX1-B SINGLE LINE	2AW2727-EI
480 V SWITCHGEAR 2EX2-A SINGLE LINE	2AW2728-EI
480 V SWITCHGEAR 2EX2-B SINGLE LINE	2AW2729-EI

TRAIN A BOP CABINET WIRING DIAGRAM	5AW2651-JT-05
TRAIN B BOP CABINET WIRING DIAGRAM	5AW2661-JT-05
WESTINGHOUSE ENGINEERING REFERENCE DRAWING	9J30001

S1 — ELECTROMAX INSTRUMENTS INC. TVA CONTRACT 79KJE-822988 FOR BOP ISOLATORS

SYMBOLS:

.TOC - CELL MOUNTED AUXILIARY SWITCHES ACTUATED BY BREAKER CELL POSITION. CONTACTS SHOWN WITH BREAKER IN THE FULLY CONNECTED POSITION.

• OTS - OVERCURRENT TRIP SWITCH

K - KEY INTERLOCK NUMBER

■ - LOW VOLTAGE SWITCHGEAR COMPARTMENT TERMINAL

AMMETER AND AMP TRANSDUCER TEST SWITCH SHOWN IN TEST POSITION

S1 — □ - ISOLATOR

MOTOR CONTROL CENTER NOTES:

17. 480 V MOTOR CONTROL CENTER BOARD FUNCTIONS ARE SHOWN ON SHEETS 9 THRU 18 OF THIS DRAWING.
18. SEE GOULD/ITE, TVA CONTRACT 75K5-86242 FOR 480 V CLASS 1E MOTOR CONTROL CENTER LAYOUT DRAWINGS AND CONNECTION DIAGRAMS.
19. SYSTEM JUMPERS ARE FIELD INSTALLED AND ARE SHOWN IN-FUNCTION WITHIN THE MOTOR CONTROL CENTER BOXES. THESE JUMPERS ARE DESIGNATED "J" PRECEDED BY THE UNIT AND SYSTEM DESIGNATION. SEE JUMPER TERMINATION PROGRAM FOR EACH INDIVIDUAL MCC FOR ADDITIONAL DETAILS.

REFERENCE DRAWINGS

ITE COMPARTMENT WIRING DIAGRAMS	WD-53893
480 V MCC COMPARTMENT TYPICAL SCHEMATICS	5GW0747-RP
SEQUENCE SHED AND LOAD FCLD	2GW0900-IL
ANNUNCIATOR SYSTEM SCHEMATIC	5GW2640-IA
SEAMS SYSTEM SCHEMATIC	5GW0640-IS
ANNUNCIATOR AND OPERATIONS RECORDING SYS SCH	9CW7364-QA
WESTINGHOUSE FEEDER BREAKER SCHEMATIC	1245F04
WESTINGHOUSE 2EX1-A CONNECTION DIAGRAM UNIT C	1245F83
WESTINGHOUSE 2EX1-B CONNECTION DIAGRAM UNIT C	1245F86
WESTINGHOUSE 2EX2-A CONNECTION DIAGRAM UNIT C	1245F93
WESTINGHOUSE 2EX2-B CONNECTION DIAGRAM UNIT C	1245F98
WESTINGHOUSE 2XEI-B CONNECTION DIAGRAM UNIT E	1245F90

SYMBOLS:

□- MOTOR CONTROL CENTER COMPARTMENT TERMINAL

PRC APERTURE CARD

Docket # 50-438
Control # 8304050536
Date 3-25-83
REGULATORY DOCKET FILE

COMPANION DWGS: 5GW2740-E1-02 THRU-17

REVIEWED
RC(CIVIL) N/A
RE(ELEC) [illegible]
PM(MECH) N/A

INSPECTED AND APPROVED FOR ISSUE

1 467,91 2-24-79 TRD CHANGED NOTE 6, & ADDED NOTE 7 AND MINOR CHANGES.

REV NO.	ESK NO.	DATE	DSGN	DRWN	CHKD	SUPV	ISSD	CHKD
			T.R. Dennis		W.E. Allsbrook			

SCALE EXCEPT AS NOTED

GENERAL
UNIT 2

SYSTEM SCHEMATIC 480V CLASS 1E AC AUXILIARY POWER SYSTEM

BELLEFONTE NUCLEAR PLANT
TENNESSEE VALLEY AUTHORITY
DIVISION OF ENGINEERING DESIGN

Q

SUBMITTED	RECOMMENDED	APPROVED
W.E. Allsbrook	[illegible]	R.M. Bolton

KNOXVILLE 1-12-79 | 00 | C | 5GW2740-E1-01 | 21

ACCEPTED AS CONSTRUCTED